ABSTRACT OF THE DISCLOSURE

An input two-dimensional image is divided into equal-size blocks. MIP maps with different resolutions are generated in response to each of the blocks. A memory stores data representative of the MIP maps for each of

5 the blocks. Polygon data represent conditions of a polygon and also a correspondence between the polygon and positions of pixels of a two-dimensional image to be applied to the polygon. On the basis of the polygon data, at least one is selected from the MIP maps represented by the data in the memory as a desired MIP map on a pixel-by-pixel basis. Data

10 representative of the desired MIP map are read from the memory. Calculation is made as to a color intensity of each pixel in a final image in which the desired MIP map is applied to the polygon on a pixel-by-pixel basis. Data representative of each calculated pixel color intensity are outputted.